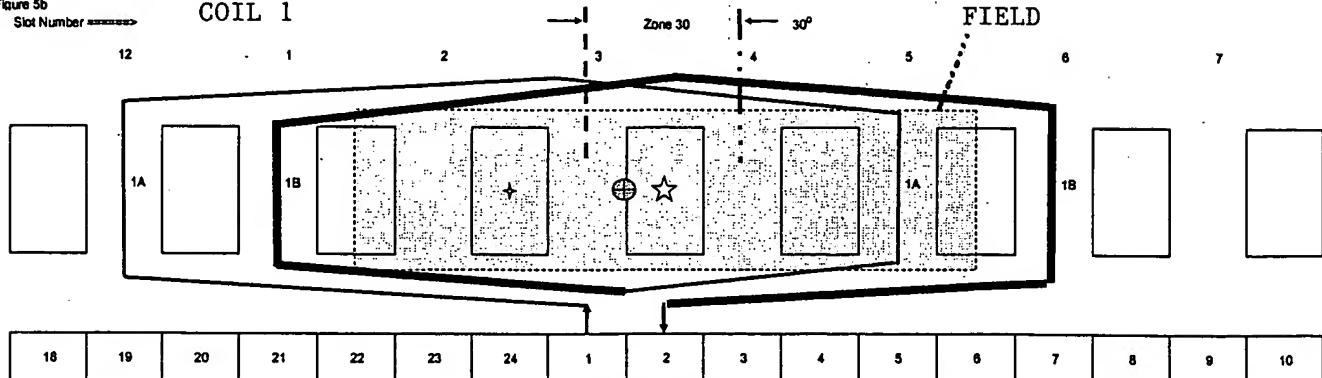




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Figure 5b
 Slot Number ----->

COIL 1



In the position shown in Figure 5a

Fig. 5A

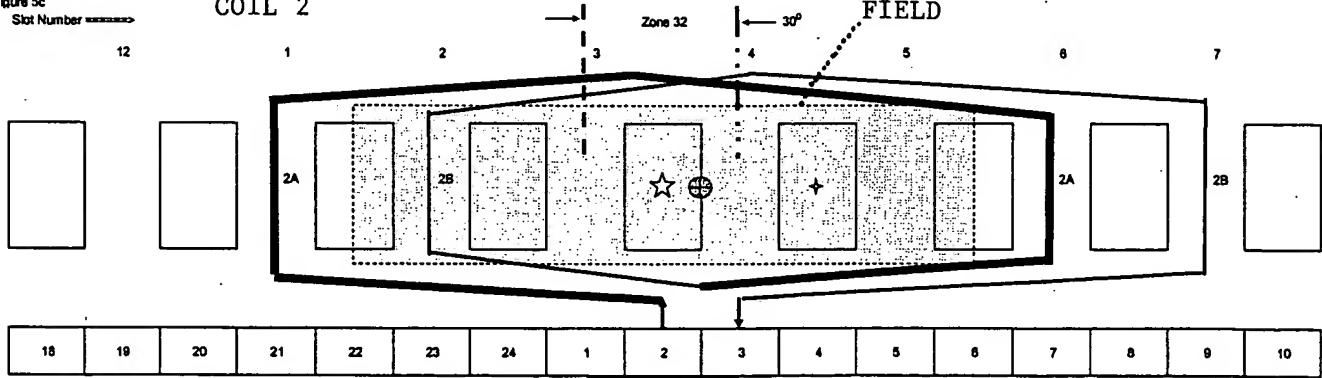
BRUSH

40

12

Figure 5c
 Slot Number ----->

COIL 2



In the position shown in Figure 5a

12

BRUSH

40

Fig. 6A

Key: ★ Magnetic axis of larger subcoil

⊕ Magnetic axis of smaller subcoil

⊕ MAGNETIC AXIS of total coil (resultant)

— Axis of field pole and brush

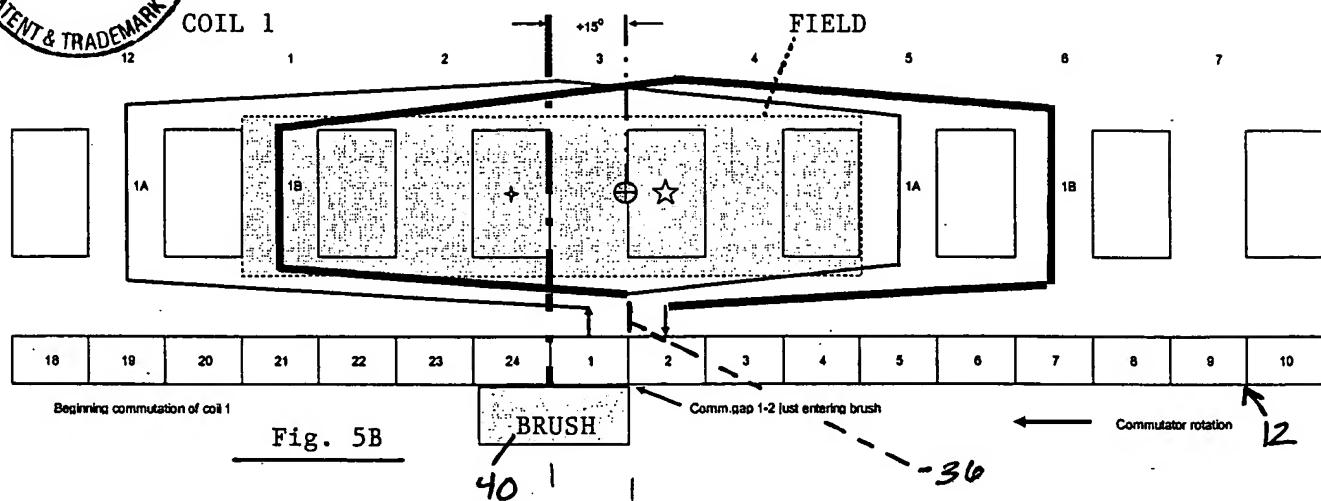
— Position of MAGNETIC AXIS at start of commutation

— Position of MAGNETIC AXIS at end of commutation



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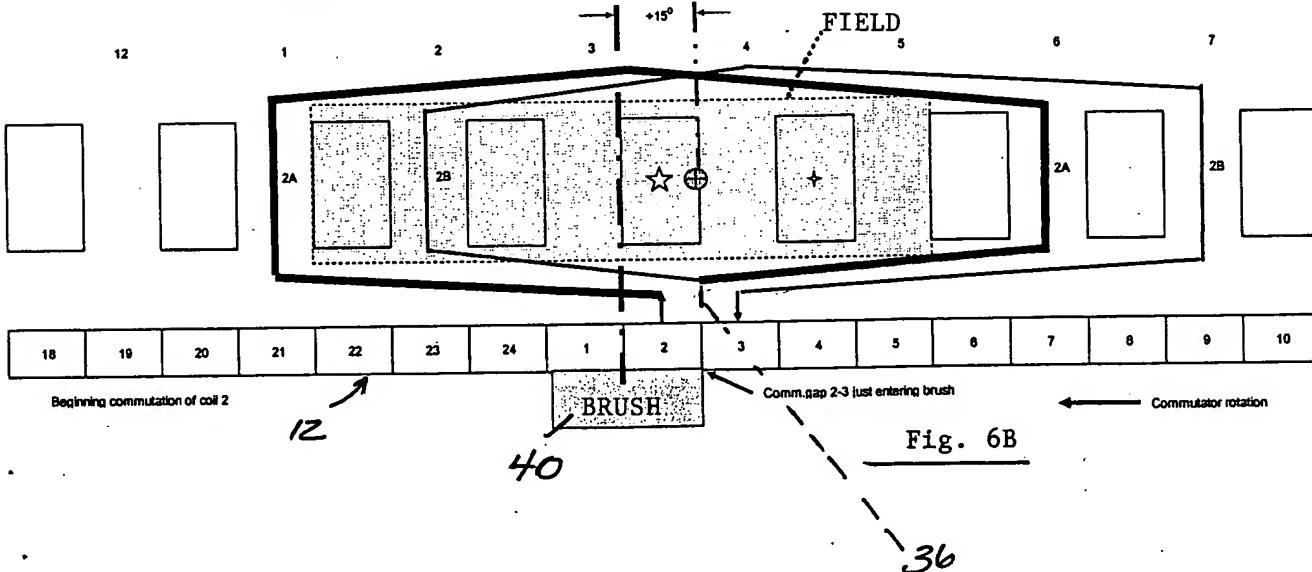
COIL 1



Beginning commutation of coil 1

Fig. 5B

COIL 2



Beginning commutation of coil 2

Fig. 6B

- Key:
- ★ Magnetic axis of larger subcoil
 - ⊕ Magnetic axis of smaller subcoil
 - ⊕ MAGNETIC AXIS of total coil (resultant)

— Axis of field pole and brush

— Position of MAGNETIC AXIS at start of commutation

— Position of MAGNETIC AXIS at end of commutation



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COIL 1

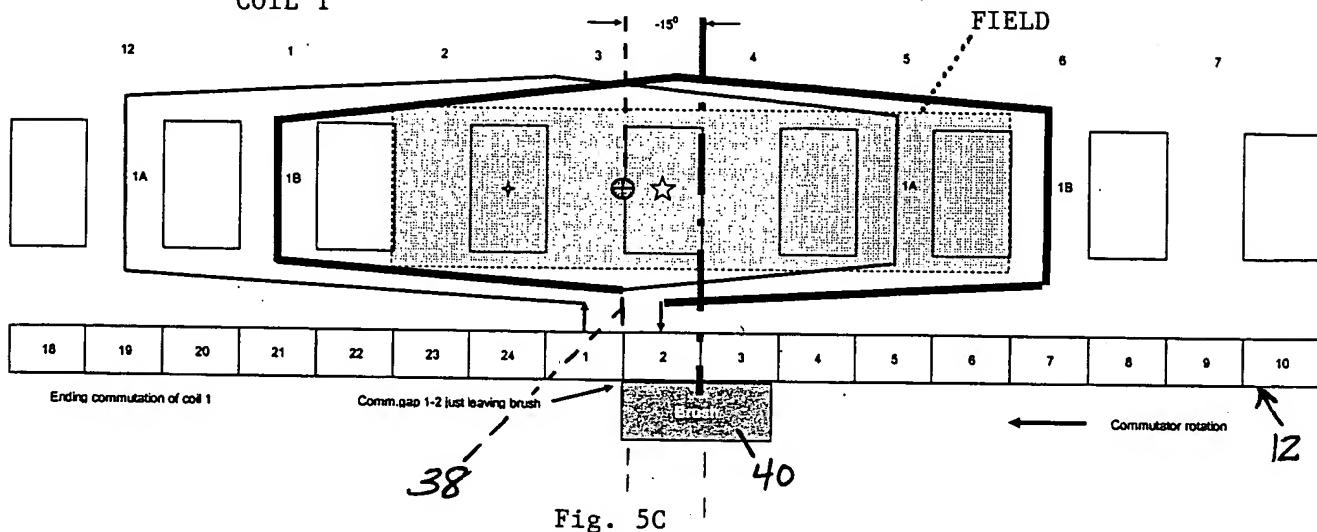


Fig. 5C

COIL 2

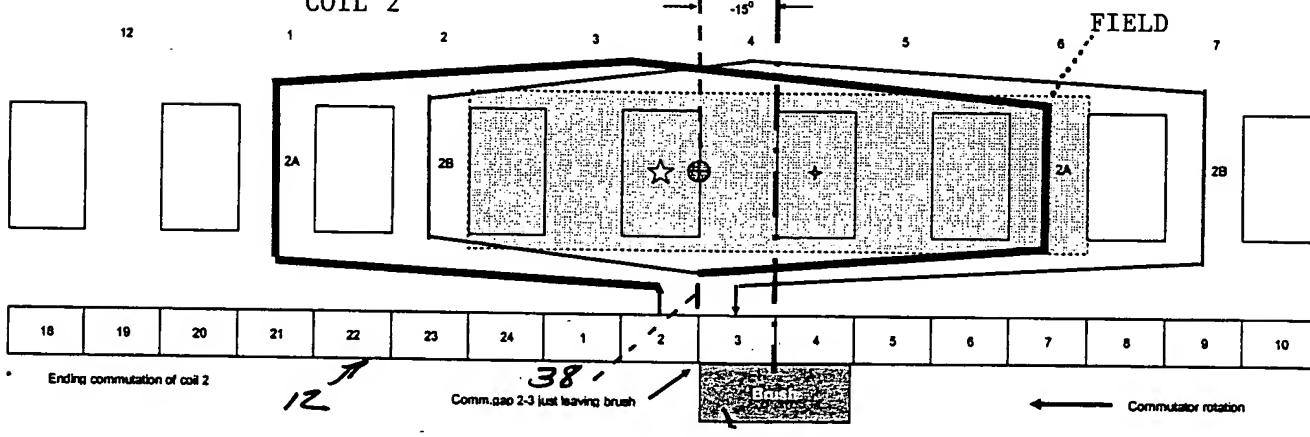


Fig. 6C

Key: Magnetic axis of larger subcoil

+ Magnetic axis of smaller subcoil

⊕ MAGNETIC AXIS of total coil (resultant)

— Axis of field pole and brush

— Position of MAGNETIC AXIS at start of commutation

- - - Position of MAGNETIC AXIS at end of commutation

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